Appendix J. Questions for AAC/Stakeholder/Public Discussion:

Approach

- Which, if any, of EPA's recommended approaches are appropriate, and why?
- Should VA consider effect-based criteria derived by finding correlations between nutrient enrichment and negative changes in biological variables?
- Should criteria development be tied to ecological endpoints indicating impairment?

Form

- Are the 1987 TAC water body type, parameter and concentration recommendations for the nutrient enriched waters regulation currently applicable, including the TAC recommendation that nitrogen was not an appropriate criterion?
- What are the most likely metrics for streams, lakes, estuaries?
- Should the criteria be causal variables (Nitrogen and Phosphorus concentrations); or be response variables like water clarity, chlorophyll a, Trophic State Indices (TSIs), or other algal indices; or both?
- What approaches should VA take to demonstrate where nitrogen criteria are not needed for freshwater lakes and reservoirs and streams and rivers?
- Should narrative translators be expressed as percentages or other statistical factors or ratios

Regionalization

- Should Virginia consider adoption of ecoregion and water body type specific criteria developed by neighboring states with shared waters?

Classification

- Should criteria development be broken out into water types: streams/lakes/estuaries?
- Should waterbody and depth specific dissolved oxygen criteria be considered? In waters that experience dissolved oxygen deficiency, should dissolved oxygen be added as a response variable? Ex: State might demonstrate via a use attainability study that in a deepwater reservoir some phosphorus enrichment may be consistent

with a particular game fishery designated use. A model might indicate that TP & DO adequately protect deep reservoir or lake's designated uses and chlorophyll a is not required as an independent criterion.

- Should VA utilize "use attainability" studies to refine uses, especially for lakes with multiple uses, such as promoting a game fishery while maintaining water clarity that promotes recreational swimming or should VA focus on determining appropriate, possibly more stringent criteria for a lake or reservoir that has a public water supply designated use.

- Should user perception surveys at lakes or a literature survey of user perception of lakes be used in determining appropriate criteria in lakes and reservoirs?

- What types of physical classification schemes should VA use for lakes (such as size) and streams (such as stream order)? Should VA set regulatory size thresholds for lakes and reservoirs that would eliminate from the population small lakes - such as agricultural ponds – and lakes and reservoirs without public access?

- Should VA develop site specific criteria for the two natural lakes in the state?

- Should VA consider percentage of wetted stream perimeter coverage of macrophytes as a criterion of nutrient enrichment?

Prioritization & Coverage

- If criteria development is broken out into water types, should the efforts run sequentially or concurrently?

- If N and P criteria are developed, should they be limited to site-specific studies, such as TMDLs?

Inventory of Existing Data

- Are the exisitng data sufficient for DEQ staff to develop water body specific criteria?

Planned Data Collection

- Do DEQ staff need to conduct additional monitoring data or undertake literature surveys for default data?

Data Needs

- Should VA explore differentiation of chlorophyll a for phytoplankton vs. periphyton-dominated streams and rivers?